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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,814	02/05/2002	Raymond R. Wolter	17310-241650	8433
7590 02/26/2004				
FAEGRE & BENSON LLP 2200 Wells Fargo Center 90 South Seventh Street Minneapolis, MN 55402-3901			EXAMINER TUPPER, ROBERT S	
			ART UNIT 2652	PAPER NUMBER 6

DATE MAILED: 02/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/068,814

Applicant(s)

WOLTER ET AL.

Examiner

Robert S Tupper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 17-30, 33, and 35-40 is/are rejected.
- 7) ☒ Claim(s) 14-16, 31, 32 and 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 September 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. Claims 18-27, 33, and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The following are indefinite : "enhance the performance" (what performance, and relative to what? - claims 18 and 40), "reduce vibration" (relative to what? - claim 19), "reduce wind drag" (relative to what? – claim 20), "increase heat dissipation" (relative to what? – claim 21), "increase an external surface area" (relative to what? – claim 22), "configured for attachment" (claim 23), "internally formed" (claim 24), "externally protruding" (claim 26), and "integrally formed" (claim 33).

Applicant should recite the structural features involved.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-13, 17, 18, 21, 23, 29, 30, and 35-40 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by SHIRAISHI et al (6,144,530).

Note figures 1-4. SHIRAISHI et al ('530) shows a head suspension with a chip (13) mounted by bonding on the flexure(14). The chip is electrically connected to the head and external electrical components by a printed circuit (17). The chip is a

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structural part of the suspension (re claim 1) and inherently stiffens the suspension (re claim 17).

Note: (A) claims 4 and 38 do not require that the chip be directly mounted to the load beam; (B) claim 5 does not specify how far apart the two portions are located or that the portions are not contiguous; (C) claim 6 does not require that the first section stop at the spring region; (D) the chip, including its shape, enhances the performance of the suspension (re claim 18); (E) all chips are concerned with heat dissipation, so their external surfaces are configured to increase such (re claim 21); (F) all chips are configured to be attached (re claim 23); (G) bonding reads on "mechanically fastened (re claim 30); and (H) claim 39 does not require the portions of the load beam to be spaced and discontinuous.

4. Claims 1, 2, 4-10, 12, 18, 21-23, 29, 30, 35, and 38-40 rejected under 35 U.S.C. 102(b) as being clearly anticipated by EVANS et al (5,862,015).

Note figures 1, 5, and 7. EVANS et al shows a head suspension (8) with a chip (32) attached thereto.

These claims do not even require that the chip be involved with signal processing. Note: (A) claims 4 and 38 do not require that the chip be directly mounted to the load beam; (B) claim 5 does not specify how far apart the two portions are located or that the portions are not contiguous ; (C) concerning claim 6 shows the chip located in the spring region; (D) the chip, including its shape, enhances the performance of the suspension (re claim 18); (E) figure 5 shows a cross section with an increased external

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surface (re claims 21 and 22); (F) all chips are configured to be attached (re claim 23); (G) the chip is formed on the load beam which reads on "adhered" and "mechanically fastened" (re claims 29 and 30); and (H) claim 39 does not require the portions of the load beam to be spaced and discontinuous.

5. Claims 1-10, 12, 13, 17, 18, 19, 21, 23, 29, 30, and 35-40 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by SHIRAISHI et al (6,084,746).

Note figures 2-5. SHIRAISHI et al ('746)

Note figures 1-4. SHIRAISHI et al ('743) shows a head suspension with a chip (20) mounted by bonding on the load beam/flexure (31, 30). The chip is electrically connected to the head and external electrical components by a printed circuit (33). The chip is a structural part of the suspension (re claim 1) and inherently stiffens the suspension (re claim 17).

Note: (A) claims 4 and 38 do not require that the chip be directly mounted to the load beam; (B) claim 5 does not specify how far apart the two portions are located or that the portions are not contiguous; (C) claim 6 does not require that the first section stop at the spring region; (D) the chip, including its shape, enhances the performance of the suspension (re claim 18); (E) all chips are concerned with heat dissipation, so their external surfaces are configured to increase such (re claim 21); (F) all chips are configured to be attached (re claim 23); (G) bonding reads on "mechanically fastened" (re claim 30); and (H) claim 39 does not require the portions of the load beam to be spaced and discontinuous.

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over SHIRAISHI et al (6,144,530), EVANS et al (5,862,015), or SHIRAISHI et al (6,084,746).

All show a head suspension with a chip attached substantially as claimed.

All differ in: (A) details of the attachment structure (re claims 24-27), and (B) the manner of attachment (re claim 28).

Concerning (A), it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the listed attachment structures. The motivation is as follows: these would have been the obvious result of routine experimentation and optimization. All are known attachment structures. One of ordinary skill in the art would have used any known attachment structures where none was specified.

Concerning (B), it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the listed welding. The motivation is as follows: these are art recognized equivalents that operate in the same manner and produce the same results without any unexpected results.

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8. Claims 14-16, 31, 32, and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 20 and 33 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert S Tupper whose telephone number is 703-308-1601. The examiner can normally be reached on Mon - Fri, 6:00 AM - 3:30 PM (first Fri off).

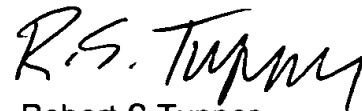
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 703-305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read "R.S. Tupper". The signature is written in a cursive, flowing style.

Robert S Tupper
Primary Examiner
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rst